

DEPARTMENT OF TRANSPORTATION

ESC/OE MS #43
1727 30TH Street, 2ND Floor
Sacramento, CA 95816



March 12, 2001

04-SF-80-4.9/5.9
04-0435C4

Addendum No. 2

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in THE CITY AND COUNTY OF SAN FRANCISCO FROM FIFTH STREET TO BEALE STREET.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on March 21, 2001.

This addendum is being issued to revise the Project Plans, the Notice to Contractors and Special Provisions and the Proposal and Contract.

Project Plan Sheets 55, 61, 65, 66, 71, 120, 121, 122 and 129 through 138 are revised. Half sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheets 62 and 68 are deleted.

On Project Plan Sheet 110, note 3 (3 of 5) is revised as follows:

"3. To weld GSP the galvanizing shall be removed where welded and the surface be wire brush cleaned and brush painted with 2 coats of unthinned zinc-rich primer."

In the Special Provisions, in the "NOTICE TO CONTRACTORS," the following paragraphs are added after the fifth paragraph:

"For all Contractors' inquiries, contact the Toll Bridge Program Duty Senior at District 04 Office, 111 Grand Avenue, Oakland, California 94612; Fax Number (510) 286-4563; E-mail address, duty_senior_tollbridge_district04@dot.ca.gov; Telephone Number (510) 286-5549.

Contractors will be requested to submit their inquiries in writing to the Oakland address, accompanied by an electronic copy where feasible, in order to avoid any misunderstandings, Written inquiries shall include the Contractor's name, address and phone number.

The responses to contractors' inquiries, unless incorporated into a formal addendum to the contract, are not a part of the contract and are provided for the Contractor's convenience only. In some instances, the question and answer may represent a summary of the matters discussed rather than a word-for-word recitation. The responses may be considered along with all other information furnished to prospective bidders for the purpose of bidding on the project. The availability or use of information provided in the responses to contractors' inquiries is not to be construed in any way as a waiver of the provisions of section 2-1.03 of the Standard Specifications or any other provision of the contract, the plans, Standard

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Specifications or Special Provisions, nor to excuse the Contractor from full compliance with those contract requirements. Bidders are cautioned that subsequent responses or contract addenda may affect or vary a response previously given, and any such subsequent response or addenda should be taken into consideration when submitting a bid for the project. Inquiries that are submitted within seventy-two (72) hours of the bid opening date might not be addressed.

Contractors' inquiries and responses will be posted on the internet at <http://www.dot.ca.gov/hq/esc/tollbridge/SFOBB/0435C4/Inquiry.html>

In the Special Provisions, Section 4, "BEGINNING OF WORK, TIME OF COMPLETION AND LIQUIDATED DAMAGES," the following paragraphs are added after the last paragraph:

"The time limit specified for the completion of work contemplated herein is considered insufficient to permit completion of the work by the Contractor working a normal number of hours per day or week on a single shift basis. Portions of work will also require the Contractor to work during weekends and legal holidays. Should the Contractor fail to maintain the progress of work in accordance with the "Progress Schedule" required in these special provisions, additional shifts will be required to the extent necessary to ensure that the progress conforms to the above-mentioned schedule, and that the work will be completed within the time limit specified.

Full compensation for any additional costs occasioned by compliance with the provisions in this section shall be considered as included in the prices paid for the various contract items of work and no additional compensation will be allowed therefor."

In the Special Provisions, Section 5-1.006, "EXCAVATION SAFETY PLANS," the first subparagraph of the first paragraph is revised as follows:

5-1.02A Excavation Safety Plans.--The Construction Safety Orders of the Division of Occupational Safety and Health shall apply to all excavations. For all excavations 5 ft or more in depth, the Contractor shall submit to the Engineer a detailed plan showing the design and details of the protective systems to be provided for worker protection from the hazard of caving ground during excavation. The detailed plan shall include any tabulated data and any design calculations used in the preparation of the plan. Excavation shall not begin until the detailed plan has been reviewed and approved by the Engineer."

In the Special Provisions, Section 5-1.007, "COST REDUCTION INCENTIVE," is deleted.

In the Special Provisions, Section 5-1.17, "PARTNERING," is revised as attached.

In the Special Provisions, Section 5-1.21, "AREAS OF STUDY AND ASSESSMENT," is revised as attached.

In the Special Provisions, Section 5-1.22, "PAYMENTS," the second paragraph is revised as follows:

"For the purpose of making partial payments pursuant to Section 9-1.06, "Partial Payments," of the Standard Specifications, the amount set forth for the contract items of work hereinafter listed shall be deemed to be the maximum value of the contract item of work which will be recognized for progress payment purposes:

| | | |
|----|---|------------|
| A. | Bridge Removal (Portion), Location A | \$ 148,000 |
| B | Bridge Removal (Portion), Location B | \$ 4,000 |
| C | Electronic Mobile Daily Diary Computer System Data Delivery | \$ 8,000 " |

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In the Special Provisions, Section 5-1.24, "SOUND CONTROL REQUIREMENTS," is revised as attached.

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," is revised as attached.

In the Special Provisions, Section 10-1.04, "COOPERATION," the second paragraph is revised as follows:

"It is anticipated that work by other contractors may be in progress adjacent to or within the limits of this project during progress of the work on this contract as listed below:

- A. 04-133024: Bayshore 1 seismic retrofit project
- B. 04-440004: Bayshore 2 seismic retrofit project.
- C. 04-043554: SFOBB seismic retrofit work from SF anchorage to Yerba Buena Island (YBI) anchorage (Project 16)
- D. 04-0435U4: SFOBB towers and piers retrofit work (Project 18)
- E. 04-0434L4: Seismic retrofit of the YBI Tunnel (Project 20)
- F. 04-012004: New east span of the SFOBB
- G. 04-248024: Widening of the 4th St. off-ramp
- H. 04-0435V4: SFOBB West Approach Seismic Retrofit Project
- I. Department of General Services Contract to renovate the Resident Engineer's office at 150 Fremont Street"

In the Special Provisions, Section 10-1.07, "SECURITY," the third paragraph is revised as follows:

"Security guards will be from a recognized, licensed security firm offering security services in the local geographic area. Selection of the security firm shall be coordinated in advance with the Engineer."

In the Special Provisions, Section 10-1.09, "PROGRESS SCHEDULE (CRITICAL PATH)", subsection "EQUIPMENT AND SOFTWARE," is revised as attached.

In the Special Provisions, Section 10-1.14, "MAINTAINING TRAFFIC," is revised as attached.

In the Special Provisions, Section 10-1.15, "CLOSURE REQUIREMENTS AND CONDITIONS," is revised as attached.

In the Special Provisions, Section 10-1.16, "TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE," is revised as attached.

In the Special Provisions, Section 10-1.23, "TEMPORARY SILT FENCE FABRIC ALONG CHAIN LINK FENCE," subsection "MEASUREMENT AND PAYMENT," the second paragraph is revised as follows:

"The contract price paid per foot for temporary silt fence along chain link fence shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in installing temporary silt fence, complete in place, maintenance and removal of temporary silt fence, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer."

In the Special Provisions, Section 10-1.285, "TEMPORARY SUPPORTS," is added as attached.

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In the Special Provisions, Section 10-1.29, "EXISTING HIGHWAY FACILITIES," subsection "REMOVE BUS SHELTER," the second paragraph is revised as follows:

"Existing bus shelter removal shall consist of removing posts, frames, portions of the foundations, walkways with safety railings, lighting electrical equipment, and fire water lines and hoses. The existing fire water line shall be capped at the terminal building."

In the Special Provisions, Section 10-1.29, "EXISTING HIGHWAY FACILITIES," subsection "REMOVE BUS SHELTER," the fourth paragraph is revised as follows:

"Existing concrete foundations may be abandoned in place, except that the concrete base, including the reinforcing steel, shall be removed to the top of the concrete island. Concrete island shall be restored with material equivalent to the surrounding material, so that a smooth island section remains at the completion of the work."

In the Special Provisions, Section 10-1.29, "EXISTING HIGHWAY FACILITIES," subsection "REMOVE CONCRETE (A1-6 CURB)," the second paragraph is revised as follows:

"Removing A1-6 concrete curb will be measured by the linear foot, measured along the curb before removal operations."

In the Special Provisions, Section 10-1.30, "BRIDGE REMOVAL (PORTION)," the second requirement of the sixth paragraph is revised as follows:

"The construction and removal of the protective cover and the installation and removal of temporary railings shall conform to the requirements under sections entitled "Maintaining Traffic," "Temporary Railings," and "Order of Work" of these special provisions."

In the Special Provisions, Section 10-1.32, "HAZARDOUS AND NON-HAZARDOUS MATERIAL EXCAVATION," is revised as attached.

In the Special Provisions, Section 10-1.33, "ROADWAY BACKFILL MATERIAL," is deleted.

In the Special Provisions, Section 10-1.37, "PILING," the fifth paragraph is revised as follows:

"The "Bayshore Freeway Viaduct Pile Indicator Test Program (PITP)" dated December 1997 is available at the location shown below:

California Department of Transportation
District 4
Toll Bridge Duty Senior's Office
111 Grand Avenue, 12th Floor
Oakland, CA 94612
Telephone No. (510) 286-5549"

In the Special Provisions, Section 10-1.41, "CORE CONCRETE AND BOND ROD," the following paragraph is added after the last paragraph:

"Full compensation for backfilling ballast and patching asphalt concrete shall be considered as included in the contract price paid per linear foot for core concrete (3 1/2") and bond rod and no additional compensation will be allowed therefor."

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In the Special Provisions, Section 10-1.45, "STEEL STRUCTURES," subsection "DRAWINGS," is revised as attached.

In the Special Provisions, Section 10-1.56, "CONCRETE BARRIER," the section heading is revised to "CONCRETE BARRIER (TYPE 41 MOD.)."

In the Proposal and Contract, the Engineer's Estimate Items 7, 11, and 13 are revised as attached.

To Proposal and Contract book holders:

Replace page 3 of the Engineer's Estimate in the Proposal with the attached revised page 3 of the Engineer's Estimate. The revised Engineer's Estimate is to be used in the bid.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This office is sending this addendum by UPS overnight mail to Proposal and Contract book holders to ensure that each receives it.

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

REBECCA D. HARNAGEL, Chief
Office of Plans, Specifications & Estimates
Division of Office Engineer

Attachments

5-1.17 PARTNERING

The State will promote the formation of a "Partnering" relationship with the Contractor in order to effectively complete the contract to the benefit of both parties. The purpose of this relationship will be to maintain cooperative communication and mutually resolve conflicts at the lowest possible management level.

The Contractor may request the formation of a "Partnering" relationship by submitting a request in writing to the Engineer after approval of the contract. If the Contractor's request for "Partnering" is approved by the Engineer, scheduling of a "Partnering" workshop, selecting the "Partnering" facilitator and workshop site, and other administrative details shall be as agreed to by both parties.

The costs involved in providing a "Partnering" facilitator and a workshop site will be borne equally by the State and the Contractor. The Contractor shall pay all compensation for the wages and expenses of the facilitator and of the expenses for obtaining the workshop site. The State's share of such costs will be reimbursed to the Contractor in a change order written by the Engineer.

Markups will not be added to the costs of providing a "Partnering" facilitator and workshop site. All other costs associated with the "Partnering" relationship will be borne separately by the party incurring the costs.

The establishment of a "Partnering" relationship will not change or modify the terms and conditions of the contract and will not relieve either party of the legal requirements of the contract.

5-1.21 AREAS OF STUDY AND ASSESSMENT

The Contractor's attention is directed to "Order of Work", "Hazardous and Non-Hazardous Materials, General", "Hazardous and Non-Hazardous Material Excavation", "Portable Lighting", and "Security" of these special provisions, and to the Areas of Study and Assessment (ASA) shown on the plans.

All construction activities within the Areas of Study and Assessment shall be performed in accordance with these special provisions and as directed by the Engineer.

GENERAL -- It is the intent of the Department under Section 106 of the National Historic Preservation Act of 1966 and the Caltrans Environmental Handbook (Vol. 2: 1-2.2) that if archaeological resources are discovered during construction, the Contractor shall stop construction activities until the finds are evaluated. If the finds are significant, the archaeologists will record and extract them. Should human skeletal remains be uncovered within the project limits, an archeological investigation monitored by a Native American consultant retained by the Department will be required.

The California Public Resources Code Chapter 1.7, Section 5097.5, makes it a misdemeanor for anyone to knowingly disturb a historical feature. California Public Resources Code Sections 5097.98 and 5097.00 require protection of Native American remains which might be discovered and outline procedures for handling any burials found. The California Public Resources Code Section 5097.9 and Health and Safety Code 7050 require coordination with the Native American Heritage Commission (NAHC).

The California Administrative Code, Title 14, Section 4307, mandates that no person shall disfigure any object of historical interest or value. The California Penal Code, Title 14, Part 1, Section 622-1/2 makes it a misdemeanor to destroy anything of historical value within any public place.

CONSTRUCTION-- All construction activities are permissible within the project area. However, no seismic retrofit construction work as shown on the plans is permitted within the ASA until archaeological investigations are complete.

After award of contract, the Engineer will arrange a pre-construction meeting with the Contractor and Department staff archaeologist to discuss work within ASA. The Contractor shall notify the Engineer at least 15 calendar days in advance of commencing any removal or excavation work within the ASA Blocks in order for the archeological teams to mobilize.

The Contractor shall attend regular weekly meetings with the Engineer to discuss the work progress in the ASA.

Investigations by the Department staff archaeologist or his designated representative in the ASA will begin within 45 days after the approval by the Engineer of the "Health, Safety and Work Plan" specified in the section entitled "Hazardous and Non-Hazardous Material, General" of these special provisions. Department staff archaeologist and/or his/her designated representative will work Monday through Friday, with no weekend or overtime hours.

The Contractor shall coordinate his work hours with the hours of the archeological team and shall prepare each ASA Block for the archeological team by removing existing roadway pavement structural section, sidewalk, curb and gutter as necessary to expose the top of the soil. The Contractor shall provide the archeological team with an area adjacent to each excavation to examine all soils removed from each ASA Block.

Schedule of Work for ASA Blocks -- The schedule for archaeological investigative work on various ASA blocks will be as follows. This schedule does not include other associated contract work within the ASA Blocks paid separately such as removing the existing pavement, sidewalk, curb and gutters, excavating and backfilling the top two feet of soil below the original grade, asphalt concrete paving, and the installation and removal of temporary chain link fence.

| ASA Block Number | Estimated Duration of Archaeological Investigation (Weeks) |
|------------------|---|
| 4 | 7 |
| 5 | 2 |
| 7 | 2 |
| 9 | 3 |
| 10 | 10 |
| 11 | 3 |

At the direction of the Engineer, the Contractor may be directed to work on more than one ASA Block at a time. The excavated material, however, shall be confined, stockpiled, and backfilled within the limits of the generating blocks as shown on the plans.

At the direction of the Engineer, the Contractor shall provide, within 72 hours of request:

- A. An excavator and operator. The excavator shall be equipped with an extending boom with 20-foot reach, shall have a rotating bucket capacity with smooth-cut edge; rubber tires, be chassis mounted, and have a minimum of three axles.
- B. A backhoe and operator. The backhoe shall be equipped with a grading bucket.

It is anticipated that the archaeological excavation depths at each ASA block will vary between 2 feet below the original grade and the shoring depths shown on the plans. Following the removal of the top 2 feet of soil below the original grade, the Contractor shall excavate to a depth specified by the Engineer. Should the excavation depth, as directed by the Engineer, exceed more than five feet below the original grade, shoring to the depths and limits shown on the plans shall be designed, furnished, installed, and removed when no longer needed, by the Contractor. Shoring shall conform to Section 5-1.02A of the Standard Specifications and shall not be installed until five feet of overburden is removed, unless directed by the Engineer.

Shoring for a well, with a diameter of 4 to 8 feet, shall be available at the request of the Engineer, and shall be designed, furnished, installed, and removed when no longer needed, by the Contractor. Well shoring shall conform to Section 5-1.02A of the Standard Specifications.

Should human skeletal remains or other archaeological finds be uncovered during construction outside of the ASA, the Contractor's construction activities, within 35 feet of the find, shall be halted immediately. The Contractor's construction activities shall not be resumed until the Engineer notifies the Contractor in writing that the archaeological investigation has been completed.

All archeological artifacts, including but not limited to historic bottles, ceramics, and coins found within the project limits during project activities are the property of the State, and shall be turned over to the Engineer upon discovery.

If, in the opinion of the Engineer, the Contractor's operation is delayed or interfered with by reason of such findings described above, the State will compensate the Contractor for such delays to the extent provided in Section 8-1.09, "Right of Way Delays" of the Standard Specifications, and not otherwise, except as provided in Section 8-1.10, "Utility and Non-Highway Facilities" of the Standard Specifications.

PAYMENT -- Contractor labor, equipment and materials required for archeological investigations as specified in these special provisions will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications.

The following associated contract item and extra work paid for separately are not part of the archeological investigation work:

- A. Removal and disposal of existing fencing.
- B. Installation and removal of temporary chain link fencing.
- C. Removal and disposal of existing pavement structural section, sidewalk, curb, and gutter.
- D. Removal, handling, stockpiling, and backfilling of excavated soil up to a depth of 2 feet below the original grade within the ASA limits.
- E. Portable lighting for work in ASA by archaeologists on Blocks 5, 9, 10 and 11.
- F. Security services for the ASA Blocks during non-working hours.
- G. Asphalt concrete paving of the ASA Blocks.

Full compensation for the seven items of work listed above, including inefficiencies and loss of productivity resulting from the archeological investigations specified in these special provisions, shall be considered as included in the contract item prices or extra work bills paid for the various items of work involved, and no additional compensation will be allowed.

5-1.24 SOUND CONTROL REQUIREMENTS

Sound control shall conform to the provisions in Section 7-1.01I, "Sound Control Requirements," of the Standard Specifications and these special provisions.

Except as otherwise specified in this section, the noise level from any of the Contractor's operations shall not exceed 86 dBA L(max), when measured at a distance of 50 feet from the noise source, between the hours of 8:00 p.m. and 8:00 a.m., seven days a week.

Except for pile driving, there are no noise limits from 8:00 a.m. to 8 p.m., including weekends and legal holidays.

Pile driving noise level shall not exceed 105 dBA L(max) at 100 feet and shall be performed only between 8:00 a.m. and 7:00 p.m., Monday through Friday, and between 8 a.m. to 6 p.m. on weekends and legal holidays.

The Contractor shall monitor noise levels and submit daily reports to the Engineer indicating noise levels at 100 feet from the location of pile driving during pile driving operations, and at a distance of 50 feet from the location of all other operations.

Monitoring shall be performed using a Type 1 Sound Level Meter, as specified by the latest ANSI standards, measuring a dynamic range of 40-120 dB. Noise levels shall be A-weighted with a minimum sampling rate of 64 samples per second (Fast). Root Mean Square (RMS) sound pressure levels (SPLs) shall be expressed by the descriptors L(max) and Leq(h). Microphones shall be equipped with windscreens and shall be positioned 50 feet from the noise source as designated by the Engineer. Monitoring shall be performed for a duration of at least 5 minutes during each work operation. Additional spot readings shall be taken as directed by the Engineer to assure the noise level during work operations are within the allowable limits. Noise monitoring equipment shall be calibrated before and after each work shift. The noise monitor shall print data to a serial printer, providing immediate on-site results. The Contractor shall keep a copy of all documentation and submit one copy to the Engineer.

Said noise level requirement shall apply to all equipment on the job or related to the job, including but not limited to trucks, transit mixers or transient equipment that may or may not be owned by the Contractor. The use of loud sound signals shall be avoided in favor of light warnings except those required by safety laws for the protection of personnel.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

10-1.01 ORDER OF WORK

Order of work shall conform to the provisions in Section 5-1.05, "Order of Work," of the Standard Specifications and these special provisions.

Attention is directed to "Piling" elsewhere in these special provisions. Driving system submittals shall be submitted prior to driving any piles. Dynamically monitoring piles will be required to establish acceptance criteria for piling.

The first order of work shall be the initial baseline investigation of "Survey of Existing Non-Highway Facilities," "Vibration Monitoring," and "Sewer Video Survey" as described elsewhere in these special provisions, and to order the Type 15 Electroliers. The Engineer shall be furnished a statement from the vendor to the effect that the order for electroliers has been received and accepted by the vendor.

Attention is directed to the section entitled "Areas of Study and Assessment" elsewhere in these special provisions. Archaeological investigation work in the areas of archaeological study and assessment shall proceed on one ASA Block at a time, in the order of staging depicted on the plans, unless the Engineer approves otherwise in writing.

The order of work for the seismic retrofit portion of the contract shall be as follows:

- 1) Overlaying of the parking lot at the corner of Folsom and Essex Streets, and providing the lighting for the parking lot, as shown on the plans. All work on the lot shall be completed prior to August 1, 2001. The Contractor shall notify the Engineer at least 10 days prior to commencing work on this portion of the contract. All work for this portion shall be performed on weekends and lot shall be available for tenant's use during the week, unless approved otherwise in writing by the Engineer.
- 2) The seismic retrofit work for the west loop of the Transbay Transit Terminal, along with the bridge rail removal and replacement, as shown on the plans. No work related to bridge rail removal and replacement shall commence prior to May 1, 2001.
- 3) The seismic retrofit work for the east loop of the Transbay Transit Terminal, as shown on the plans. The entrance to the parking lot from Fremont Street shall be maintained at all times for deliveries to the Greyhound Express package service. The Contractor shall maintain access to the Greyhound Express Package Service entrance adjacent to column 69S during Greyhound Express Package Service's business hours. The Contractor shall notify the Engineer in writing of his intent to start work on this portion at least 30 working days prior to start of the seismic retrofit work on this section.
- 4) All work at each portion 1-3 above shall be completed before the Contractor commences work at the next location, unless approved otherwise in writing by the Engineer. For both archaeological investigation work and seismic retrofit work, the Contractor shall notify the Engineer in writing at least 10 working days before the start of work of his intention to commence work on either the ASA Blocks, or in any of the seismic retrofit work areas described herein.

All work on city streets in the City of San Francisco shall require a permit from the City of San Francisco. The Contractor shall be responsible for obtaining any necessary permit from the City and County of San Francisco. Penalties for violations of the permit regulations and for causing any delays or interruptions to San Francisco Municipal Railways (MUNI) operations shall be the responsibility of the Contractor. Regulations and local ordinances for the City of San Francisco will be available to the prospective bidders at:

Bureau of Street Use and Mapping
Department of Public Works
875 Stevenson Street, Room 460
San Francisco, CA 94103
Telephone No. 415-554-5810

The Department has entered into an agreement with the San Francisco Municipal Railways (MUNI), under which, MUNI will de-energize and drop its over head catenary system on Howard Street for 2 weekends. This is for the purpose of allowing the Contractor to install the protective cover and to remove the portions of existing concrete barrier over the MUNI system. The Contractor shall notify MUNI Project Manager, Telephone No. (415) 554-1657, at least 30 working days before closing Howard Street for the work specified above. Attention is directed to sections entitled "Sound Control Requirements", "Closure Requirements and Conditions", and "Bridge Removal (Portion)" in these special provisions. The MUNI overhead wires will be kept energized at all other times. At no other time shall the Contractor prevent or delay the operation of MUNI vehicles. The Contractor shall provide flag personnel as required to assist MUNI service operating around the construction area.

The Contractor shall conduct work so that CAL-OSHA Article 37 and California Public Utilities Commission general Order 95 (Go-95) are met.

The lanes made available for traffic on Howard Street shall be located so as to include an adequate and allowable travel path for MUNI coach lines utilizing the energized overhead trolley wires. The extreme touring range of the centerline of a trolley coach is 10 feet from the centerline of the trolley wires.

The Contractor shall notify the Engineer in writing at least 10 working days prior to entering any State-owned parking lot for any archaeological investigation or seismic retrofit work. This written notification shall be 30 days for the seismic retrofit work related to the parking lot under the east loop of the Transbay Transit Terminal.

Before starting work, the Contractor shall submit to the Engineer written description and detailed schedule of the intended operations relative to keeping the traffic signals, street lighting and changeable message signs in operation. Such schedule shall be part of the progress schedule required by Section 107.04 of SSDPWSF referenced in Section 10-3, "Signal, Lighting and Electrical Systems," of these special provisions.

Temporary railing (Type K) and temporary crash cushions shall be secured in place prior to commencing work for which the temporary railing and crash cushions are required.

No above ground electrical work shall be performed on any system within the project site until all Contractor-furnished electrical materials for that individual system have been tested and delivered to Contractor.

Attention is directed to "Maintaining Traffic" and "Temporary Pavement Delineation" of these special provisions and to the stage construction sheets of the plans.

Attention is directed to "Progress Schedule (Critical Path)" of these special provisions regarding the submittal of a general time-scaled logic diagram within 10 days after approval of the contract. The diagram shall be submitted prior to performing any work that may be affected by any proposed deviations to the construction staging of the project.

Before obliterating any pavement delineation that is to be replaced on the same alignment and location, as determined by the Engineer, the pavement delineation shall be referenced by the Contractor, with a sufficient number of control points to reestablish the alignment and location of the new pavement delineation. The references shall include the limits or changes in striping pattern, including one- and 2-way barrier lines, limit lines, crosswalks and other pavement markings. Full compensation for referencing pavement delineation shall be considered as included in the contract prices paid for new pavement delineation and no additional compensation will be allowed therefor.

At the end of each working day if a difference in excess of 6 inches exists between the elevation of the existing pavement and the elevation of excavations within 8 feet of the traveled way, material shall be placed and compacted against the vertical cuts adjacent to the traveled way. During excavation operations, native material may be used for this purpose; however, once placing of the structural section commences, structural material shall be used. The material shall be placed to the level of the elevation of the top of existing pavement and tapered at a slope of 1:4 (vertical:horizontal) or flatter to the bottom of the excavation. Full compensation for placing the material on a 1:4 slope, regardless of the number of times the material is required, and subsequent removing or reshaping of the material to the lines and grades shown on the plans shall be considered as included in the contract price paid for the backfill material involved and no additional compensation will be allowed therefor. No payment will be made for material placed in excess of that required for the structural section.

EQUIPMENT AND SOFTWARE

The Contractor shall provide for the State's exclusive possession and use a complete computer system specifically capable of creating, storing, updating and producing CPM schedules. Before delivery and setup of the computer system, the Contractor shall submit to the Engineer for approval a detailed list of all computer hardware and software the Contractor proposes to furnish. The minimum computer system to be furnished shall include the following:

- A. Complete computer system, including keyboard, mouse, 21 inch color SVGA monitor (1024x768 pixels), Intel Pentium III 1.4 GHz microprocessor chip, or equivalent;
- B. Computer operating system software, compatible with the selected processing unit, for Windows 98 or later or equivalent;
- C. Minimum 256 megabytes of random access memory (RAM);
- D. A 60 gigabytes minimum hard disk drive, a 1.44 megabyte 3 1/2 inch floppy disk drive, 40x speed minimum CD-RW drive, Ethernet card and 56k modem;
- E. A color-ink-jet plotter with a minimum 36 megabyte RAM, capable of 300 dots per inch color, 600 dots per inch monochrome, or equivalent, capable of printing fully legible, timescaled charts, and network diagrams, in four colors, with a minimum size of 36 inches by 48 inches (E size) and is compatible with the selected system, an HP Design Jet 1055 CM or equivalent, plotter stand, roll paper assembly and automatic paper cutter, and provide plotter paper and ink cartridges throughout the contract;
- F. CPM software shall be Primavera Project Planner, the latest version for Windows 98, or later;
- G. Scheduler Analyzer Pro or equivalent (a suite of programs to assist in schedule analysis) in the latest version for Windows 95, Windows NT or later; and
- H. Microsoft Office Software, the latest version for Windows 98, Windows NT or later and McAfee Virus software or equivalent.

The computer hardware and software furnished shall be compatible with that used by the Contractor for the production of the CPM progress schedule required by the Contract, and shall include original instruction manuals and other documentation normally provided with the software.

The Contractor shall furnish, install, set up, maintain and repair the computer hardware and software ready for use at a location determined by the Engineer. The hardware and software shall be installed and ready for use by the first submission of the baseline schedule. The Contractor shall provide 24 hours of formal training for the Engineer, and three other agents of the department designated by the Engineer, in the use of the hardware and software to include schedule analysis, reporting, and resource and cost allocations. An authorized vendor of Project Primavera shall perform the training.

All computer hardware and software furnished shall remain the property of the Contractor and shall be removed by the Contractor upon acceptance of the contract when no claims involving contract progress are pending. When claims involving contract progress are pending, computer hardware or software shall not be removed until the final estimate has been submitted to the Contractor.

10-1.14 MAINTAINING TRAFFIC

Attention is directed to Sections 7-1.08, "Public Convenience," 7-1.09, "Public Safety," and 12, "Construction Area Traffic Control Devices," of the Standard Specifications and to the provisions in "Public Safety" of these special provisions and these special provisions. Nothing in these special provisions shall be construed as relieving the Contractor from the responsibilities specified in Section 7-1.09.

Attention is also directed to sections entitled "Order of Work", and "Bridge Removal (Portion)" in these special provisions regarding concrete barrier removal and replacement operations over City streets.

Lane closures shall conform to the provisions in section "Traffic Control System for Lane Closure" of these special provisions.

Personal vehicles of the Contractor's employees shall not be parked on the traveled way or shoulders including any section closed to public traffic.

The Contractor shall notify local authorities of the Contractor's intent to begin work at least 30 days before work is begun over and on City streets at telephone No. (415)554-2328. The Contractor shall cooperate with local authorities relative to handling traffic through the area and shall make arrangements with the City and County of San Francisco Department of Parking and Traffic (DPT) at the following telephone numbers with regard to local street lane closures, keeping the working area clear of parked vehicles, and for removal of any parking meters on Natoma Street:

- | | |
|--|---------------|
| A. Applying For and Registering Tow-Away Zones | (415)554-9928 |
| B. Towing Cars from Tow-Away Zones | (415)553-1200 |
| C. Parking Meter Removal (3 Working Days Notice) | (415)554-2323 |

Whenever vehicles or equipment are parked on the shoulder within 6 feet of a traffic lane, the shoulder area shall be closed with fluorescent traffic cones or portable delineators placed on a taper in advance of the parked vehicles or equipment and along the edge of the pavement at 25 feet intervals to a point not less than 25 feet past the last vehicle or piece of equipment. A minimum of 9 cones or portable delineators shall be used for the taper. A C23 (Road Work Ahead) or C24 (Shoulder Work Ahead) sign shall be mounted on a portable sign stand with flags. The sign shall be placed where designated by the Engineer.

Lanes shall be closed only during the hours shown on the charts included in this section "Maintaining Traffic." Except work required under Sections 7-1.08 and 7-1.09, work that interferes with public traffic shall be performed only during the hours shown for lane closures. Lanes shall only be closed on those roadways for which lane closure charts have been provided.

One lane of the three available lanes of Transbay Transit Terminal loop ramps may be closed from 7:30 p.m. to 6 a.m. for seismic retrofit construction activities. The Contractor shall furnish the Engineer a proposed schedule for the closure of the loop ramp lanes at least 15 working days prior to the start of work, so that transit agencies utilizing the terminal may be notified. At the request of the Engineer, the Contractor may be directed to construct temporary portable pedestrian and luggage access ramps, and to post pedestrian barricades and detour notification signs when one of the loop lanes and/or passenger platforms is closed.

Designated legal holidays are: January 1st, the third Monday in February, the last Monday in May, July 4th, the first Monday in September, Thanksgiving Day, and December 25th. When a designated legal holiday falls on a Sunday, the following Monday shall be a designated legal holiday.

Minor deviations from the requirements of this section concerning hours of work which do not significantly change the cost of the work may be permitted upon the written request of the Contractor, if in the opinion of the Engineer, public traffic will be better served and the work expedited. These deviations shall not be adopted by the Contractor until the Engineer has approved the deviations in writing. All other modifications will be made by contract change order.

| Chart No. 1 Multilane Lane Requirements | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------------|---|---|---|---|---|---|---|---|---|----|----|------|---|---|---|---|---|---|---|---|---|----|----|--|
| Location: Folsom Street from First to Second Street- Eastbound | | | | | | | | | | | | | | | | | | | | | | | | | |
| FROM HOUR TO HOUR | a.m. | | | | | | | | | | | | p.m. | | | | | | | | | | | | |
| | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| Mondays through Thursdays | 2 | 2 | 2 | 2 | 2 | 2 | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | 2 | 2 | |
| Fridays | 2 | 2 | 2 | 2 | 2 | 2 | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | 2 | 2 | |
| Saturdays | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | |
| Sundays | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | |
| Working day before designated legal holiday | 2 | 2 | 2 | 2 | 2 | 2 | | | | | 1 | 1 | 1 | 1 | | | | | | 1 | 1 | 1 | 2 | 2 | |
| Designated legal holidays | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | |
| Legend: | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | One lane closed | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Two lanes closed | | | | | | | | | | | | | | | | | | | | | | | | |
| | No lane closure allowed | | | | | | | | | | | | | | | | | | | | | | | | |
| REMARKS: 1. Howard, Tehema, Natoma, or Clementina Streets shall not be simultaneously closed during Folsom Street lane closures. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. The number of existing right and left turn lanes shall be maintained in addition to the above through lane requirements. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Contractor shall make his own arrangements for the assistance of DPT in posting appropriate “No Parking” signs and for clearing parked vehicles from the impacted construction zone by contacting DPT at the telephone numbers listed in this special provision. | | | | | | | | | | | | | | | | | | | | | | | | | |

| Chart No. 2 Multilane Lane Requirements | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------------------|---|---|---|---|---|---|---|---|---|----|----|------|---|---|---|---|---|---|---|---|---|----|----|--|
| Location: Howard Street from First to Second Street- Westbound | | | | | | | | | | | | | | | | | | | | | | | | | |
| FROM HOUR TO HOUR | a.m. | | | | | | | | | | | | p.m. | | | | | | | | | | | | |
| | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| Mondays through Thursdays | 2 | 2 | 2 | 2 | 2 | 2 | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | 2 | 2 | |
| Fridays | 2 | 2 | 2 | 2 | 2 | 2 | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | 2 | 2 | |
| Saturdays | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Sundays | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Working day before designated legal holiday | 2 | 2 | 2 | 2 | 2 | 2 | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | 2 | 2 | |
| Designated legal holidays | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | |
| Legend: | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Two lanes closed | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | One lane closed | | | | | | | | | | | | | | | | | | | | | | | | |
| | No lane closure allowed | | | | | | | | | | | | | | | | | | | | | | | | |
| REMARKS: 1. Folsom, Tehema, Natoma, or Clementina Streets shall not be simultaneously closed during Howard Street lane closures. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. The number of existing right and left turn lanes shall be maintained in addition to the above through lane requirements. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Contractor shall make his own arrangements for the assistance of DPT in posting appropriate “No Parking” signs and for clearing parked vehicles from the impacted construction zone by contacting DPT at the telephone numbers listed in this special provision. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Howard Street has 5 lanes , two of which are used for metered parking. Parking is prohibited on North side of Howard Street from 4 p.m. to 6 p.m., Monday to Friday (Tow-Away). The parking lane becomes an active traffic lane during those hours. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Contractor must be actively working on the block to be authorized to close lanes. | | | | | | | | | | | | | | | | | | | | | | | | | |

| Chart No. 3 Multilane Lane Requirements | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------------|---|---|---|---|---|---|---|---|---|----|----|------|---|---|---|---|---|---|---|---|---|----|----|----|
| Location: East and West Loop Structures of the Transbay Transit Terminal | | | | | | | | | | | | | | | | | | | | | | | | | |
| FROM HOUR TO HOUR | a.m. | | | | | | | | | | | | p.m. | | | | | | | | | | | | |
| | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Mondays through Thursdays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 |
| Fridays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 |
| Saturdays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 |
| Sundays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 |
| Working day before designated legal holiday | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 |
| Designated legal holidays | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 |
| Legend: | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | One lane closed. | | | | | | | | | | | | | | | | | | | | | | | | |
| | No lane closure allowed. | | | | | | | | | | | | | | | | | | | | | | | | |
| REMARKS: 1. Only one lane of the three available lanes may be closed to bus traffic for seismic retrofit work on the Transbay Transit Terminal loop ramps, unless approved otherwise in writing by the Engineer. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Chart does not apply to bridge railing removal work. | | | | | | | | | | | | | | | | | | | | | | | | | |

Pedestrian access facilities shall be provided through construction areas within the right of way as specified herein. Pedestrian walkways shall be surfaced with asphalt concrete, portland cement concrete or timber. The surface shall be skid resistant and free of irregularities. Hand railings shall be provided on each side of pedestrian walkways as necessary to protect pedestrian traffic from hazards due to construction operations or adjacent vehicular traffic. Protective overhead covering shall be provided as necessary to insure protection from falling objects and drip from overhead structures.

In addition to the required openings through falsework, pedestrian facilities shall be provided during pile driving, footing, wall, and other bridge construction operations. At least one walkway shall be available at all times. If the Contractor's operations require the closure of one walkway, then another walkway shall be provided nearby, off the traveled roadway.

Railings shall be constructed of wood, S4S, and shall be painted white. Railings and walkways shall be maintained in good condition. Walkways shall be kept clear of obstructions.

Full compensation for providing pedestrian facilities shall be considered as included in the prices paid for the various contract items of work involved and no additional compensation will be allowed therefor.

10-1.15 CLOSURE REQUIREMENTS AND CONDITIONS

Lane closures shall conform to the provisions in "Maintaining Traffic" of these special provisions and these special provisions.

The term closure, as used herein, is defined as the closure of a traffic lane or lanes, including ramp or connector lanes, within a single traffic control system.

CLOSURE SCHEDULE

By noon Monday, the Contractor shall submit a written schedule of planned closures for the following week period, defined as Friday noon through the following Friday noon for lane closures other than the Transbay Terminal Loop Ramps. For the Transbay Terminal Loop Ramp closures, the Contractor shall furnish the Engineer a proposed schedule for the closure of the loop ramp lanes at least 15 working days prior to the start of work, including any flagging operations related to the installation and removal of temporary railing, so that transit agencies utilizing the terminal may be notified.

Natoma, Cementina, and Tehama Streets may be closed between First and Second Street to through traffic during weekends, from 8 p.m. Friday to 5 a.m. Monday, for the bridge removal, and for the installation and removal of protective cover operations. Contractor shall make his own arrangements for the assistance of DPT in posting appropriate "No Parking" signs and for clearing parked vehicles from the impacted construction zone by contacting DPT at the telephone numbers listed in these special provisions. Contractor shall employ flagging operations to assist the utilization of the closed area by any delivery or commercial vehicles during the closure hours.

The Closure Schedule shall show the locations and times when the proposed closures are to be in effect. The Contractor shall use the Closure Schedule request forms furnished by the Engineer. Closure Schedules submitted to the Engineer with incomplete, unintelligible or inaccurate information will be returned for correction and resubmittal. The Contractor will be notified of disapproved closures or closures that require coordination with other parties as a condition of approval.

Amendments to the Closure Schedule, including adding additional closures, shall be submitted to the Engineer, in writing, at least 3 working days in advance of a planned closure. Approval of amendments to the Closure Schedule will be at the discretion of the Engineer.

The Contractor shall confirm, in writing, all scheduled closures by no later than 8:00 a.m. 3 working days prior to the date on which the closure is to be made. Approval or denial of scheduled closures will be made no later than 4:00 p.m. 2 working days prior to the date on which the closure is to be made. Closures not confirmed or approved will not be allowed.

Confirmed closures that are cancelled due to unsuitable weather may be rescheduled at the discretion of the Engineer for the following working day.

CONTINGENCY PLAN

The Contractor shall prepare a contingency plan for reopening closures to public traffic. The Contractor shall submit the contingency plan for a given operation to the Engineer concurrent with the advance closure schedule referenced above, or, should that not be possible due to rapidly changing conditions, within one working day of the Engineer's request.

LATE REOPENING OF CLOSURES

If a closure is not reopened to public traffic by the specified time, work shall be suspended in conformance with the provisions in Section 8-1.05, "Temporary Suspension of Work," of the Standard Specifications. The Contractor shall not make any further closures until the Engineer has accepted a work plan, submitted by the Contractor, that will insure that future closures will be reopened to public traffic at the specified time. The Engineer will have 2 working days to accept or reject the Contractor's proposed work plan. The Contractor will not be entitled to any compensation for the suspension of work resulting from the late reopening of closures.

COMPENSATION

The Contractor shall notify the Engineer of any delay in the Contractor's operations due to the following conditions, and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of those conditions, and the Contractor's loss due to that delay could not have been avoided by rescheduling the affected closure or by judicious handling of forces, equipment and plant, the delay will be considered a right of way delay within the meaning of Section 8-1.09, "Right of Way Delays," and compensation for the delay will be determined in conformance with the provisions in Section 8-1.09:

- A. The Contractor's proposed Closure Schedule is denied and his planned closures are within the time frame allowed for closures in "Maintaining Traffic" of these special provisions, except that the Contractor will not be entitled to any compensation for amendments to the Closure Schedule that are not approved.
- B. The Contractor is denied a confirmed closure.

Should the Engineer direct the Contractor to remove a closure prior to the time designated in the approved Closure Schedule, any delay to the Contractor's schedule due to removal of the closure will be considered a right of way delay within the meaning of Section 8-1.09, "Right of Way Delays," and compensation for the delay will be determined in conformance with the provisions in Section 8-1.09.

DAMAGES

In the event that the Contractor fails to remove the lane, shoulder, ramp or connector closures at the times specified in the "Lane Requirements and Hours of Work" included in this section, "Maintaining Traffic," damage will be sustained by the State of California and it is and will be impracticable and extremely difficult to ascertain and determine the actual damage. It is therefore agreed that the Contractor will pay to the State the amounts specified herein as liquidated damages. The liquidated damages herein provided for are in addition to those specified in Standard Specifications Section 1-1.26, "Liquidated Damages," of the Standard Specifications.

For each 10 minute period, or fraction thereof, that the street lanes, shoulders, Transbay Transit Terminal ramps lanes or connectors are not available for use by public traffic at the times specified in "Lane Requirements and Hours of Work" included in this section "Maintaining Traffic", the Department will deduct \$8,500 up to a maximum of \$153,000 per day, per incident. These deductions by the Department will be cumulative with each location or operation involved. The Department will deduct those amounts from any moneys due, or that may become due the Contractor under the contract.

Notwithstanding the provisions in the "Damages" section of these special provisions, the Contractor shall not pursue contract work requiring a closure outside the time limits specified in section "Lane Requirements and Hours of Work" of these special provisions. Once the time limits in section "Lane Requirements and Hours of Work" have been exceeded, all rights and permission to occupy the lanes, shoulders, ramps or connectors, previously granted to the Contractor, under the terms of the contract are withdrawn. In such cases, the closure shall be subject to the provisions of the "Invalid Closures" section in these special provisions and the Contractor shall immediately commence operations to remove a closure in accordance with the approved contingency plan specified herein.

10-1.16 TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE

A traffic control system shall consist of closing traffic lanes and ramps in conformance with the details shown on the plans, the provisions in Section 12, "Construction Area Traffic Control Devices," of the Standard Specifications, the provisions under "Maintaining Traffic" and "Construction Area Signs" of these special provisions, and these special provisions.

The provisions in this section will not relieve the Contractor of responsibility for providing additional devices or taking measures as may be necessary to comply with the provisions in Section 7-1.09, "Public Safety," of the Standard Specifications.

During traffic stripe operations and pavement marker placement operations using bituminous adhesive, traffic shall be controlled, at the option of the Contractor, with either stationary or moving lane closures. During other operations, traffic shall be controlled with stationary lane closures. Attention is directed to the provisions in Section 84-1.04, "Protection From Damage," and Section 85-1.06, "Placement," of the Standard Specifications.

If components in the traffic control system are displaced or cease to operate or function as specified, from any cause, during the progress of the work, the Contractor shall immediately repair the components to the original condition or replace the components and shall restore the components to the original location.

STATIONARY LANE CLOSURE

When lane and ramp closures are made for work periods only, at the end of each work period, components of the traffic control system, except portable delineators placed along open trenches or excavation adjacent to the traveled way, shall be removed from the traveled way and shoulder. If the Contractor so elects, the components may be stored at selected central locations, designated by the Engineer within the limits of the highway right of way.

Each vehicle used to place, maintain and remove components of a traffic control system on multilane highways shall be equipped with a Type II flashing arrow sign which shall be in operation when the vehicle is being used for placing, maintaining or removing the components. Vehicles equipped with Type II flashing arrow sign not involved in placing, maintaining or removing the components when operated within a stationary type lane closure shall only display the caution display mode. The sign shall be controllable by the operator of the vehicle while the vehicle is in motion. The flashing arrow sign shown on the plans shall not be used on the vehicles which are doing the placing, maintaining and removing of components of a traffic control system and shall be in place before a lane closure requiring the sign's use is completed.

MOVING LANE CLOSURE

Flashing arrow signs used in moving lane closures shall be truck-mounted. Changeable message signs used in moving lane closure operations shall conform to the provisions in Section 12-3.12, "Portable Changeable Message Signs," of the Standard Specifications, except the signs shall be truck-mounted and the full operation height of the bottom of the sign may be less than 7 feet above the ground, but should be as high as practicable.

Flashing arrow signs shall be in the caution display mode when used on 2-lane, 2-way roadways.

Truck-mounted attenuators (TMA) for use in moving lane closures shall be any of the following approved models, or equal:

- A. Hexfoam TMA Series 3000, Alpha 1000 TMA Series 1000 and Alpha 2001 TMA Series 2001, manufactured by Energy Absorption Systems, Inc., One East Wacker Drive, Chicago, IL 60601-2076, Telephone (312) 467-6750.
 - 1. Distributor (Northern): Traffic Control Service, Inc., 8585 Thys Court, Sacramento, CA 95828, Telephone 1-800-884-8274, FAX (916) 387-9734.
 - 2. Distributor (Southern): Traffic Control Service, Inc., 1881 Betmor Lane, Anaheim, CA 92805, Telephone 1-800-222-8274.
- B. Cal T-001 Model 2 or Model 3, manufacturer and distributor: Hexcel Corporation, 11711 Dublin Boulevard, P.O. Box 2312, Dublin, CA 94568, Telephone (510) 828-4200.
- C. Renco Rengard Model Nos. CAM 8-815 and RAM 8-815, manufacturer and distributor: Renco Inc., 1582 Pflugerville Loop Road, P.O. Box 730, Pflugerville, TX 78660-0730, Telephone 1-800-654-8182.

Each TMA shall be individually identified with the manufacturer's name, address, TMA model number, and a specific serial number. The names and numbers shall each be a minimum 1/2 inch high and located on the left (street) side at the lower front corner. The TMA shall have a message next to the name and model number in 1/2 inch high letters which states, "The bottom of this TMA shall be _____ inches \pm _____ inches above the ground at all points for proper impact performance." Any TMA which is damaged or appears to be in poor condition shall not be used unless recertified by the

manufacturer. The Engineer shall be the sole judge as to whether used TMAs supplied under this contract need recertification. Each unit shall be certified by the manufacturer to meet the requirements for TMA in conformance with the standards established by the Transportation Laboratory.

Approvals for new TMA designs proposed as equal to the above approved models shall be in conformance with the procedures (including crash testing) established by the Transportation Laboratory. For information regarding submittal of new designs for evaluation contact: Transportation Laboratory, 5900 Folsom Boulevard, Sacramento, California 95819.

New TMAs proposed as equal to approved TMAs or approved TMAs determined by the Engineer to need recertification shall not be used until approved or recertified by the Transportation Laboratory.

PAYMENT

The contract lump sum price paid for traffic control system shall include full compensation for furnishing all labor, materials (including signs), tools, equipment, and incidentals, and for doing all the work involved in placing, removing, storing, maintaining, moving to new locations, replacing and disposing of the components of the traffic control system shown on the plans, including the temporary portable access ramp during the nighttime passenger platform closures and all associated directional and detour signs for pedestrians, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer. Flagging costs will be paid for as provided in Section 12-2.02, "Flagging Costs" of the Standard Specifications.

The adjustment provisions in Section 4-1.03, "Changes," of the Standard Specifications shall not apply to the item of traffic control system. Adjustments in compensation for traffic control system will be made only for increased or decreased traffic control system required by changes ordered by the Engineer and will be made on the basis of the cost of the increased or decreased traffic control necessary. The adjustment will be made on a force account basis as provided in Section 9-1.03, "Force Account Payment," of the Standard Specifications for increased work and estimated on the same basis in the case of decreased work.

Traffic control system required by work which is classed as extra work, as provided in Section 4-1.03D of the Standard Specifications, will be paid for as a part of the extra work.

10-1.285 TEMPORARY SUPPORTS

Temporary supports for supporting the existing roof and beams at columns 114N and 115Q of the Transbay Transit Terminal Ramp retrofit shall be designed, furnished, constructed, maintained, and removed in conformance with the provisions in these special provisions.

Construction sequence and application of temporary support jacking loads shall be as shown on the plans. Proposed changes to the construction sequence and application of temporary support jacking loads shall be subject to the Engineer's approval.

Temporary supports shall include jacking assemblies and appurtenant items necessary to jack and support the structures.

Approval by the Engineer of the temporary support working drawings or temporary support inspection performed by the Engineer will in no way relieve the Contractor of full responsibility for the temporary supports.

TEMPORARY SUPPORT DESIGN AND DRAWINGS

The Contractor shall submit to the Engineer working drawings and design calculations for the temporary supports. Such drawings and design calculations shall be signed by an engineer who is registered as a Civil Engineer in the State of California. The temporary support working drawings and design calculations shall conform to the requirements in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. The number of sets of drawings and design calculations and times for review for temporary supports shall be the same as specified for falsework working drawings in Section 51-1.06A, "Falsework Design and Drawings," of the Standard Specifications.

Working drawings for any part of the temporary supports shall include stress sheets, anchor bolt layouts, shop details, and erection and removal plans.

The temporary support working drawings shall include descriptions and values of all loads, including construction equipment loads, descriptions of equipment to be used, complete details and calculations for jacking and supporting the existing structure.

Temporary support footings shall be designed to carry the load imposed upon them without exceeding the estimated soil bearing values and anticipated settlements.

Bracing shall be provided, as necessary, to withstand all imposed loads during erection and removal of any temporary supports. The temporary support drawings shall show provisions for such temporary bracing or methods to be used to conform to these requirements during each phase of erection and removal. Wind loads shall be included in the design of such bracing or methods. Wind loads shall conform to the applicable provisions in Section 51-1.06A(1), "Design Loads," of the Standard Specifications.

The temporary support design calculations shall show a summary of computed stresses in the (1) temporary supports, (2) connections between temporary supports and the existing structure and (3) existing load supporting members.

The existing structure shall be mechanically connected to the temporary supports. The temporary supports shall be mechanically connected to their foundations. The mechanical connections shall be capable of resisting the lateral temporary support design forces. Friction forces developed between the existing structure and temporary supports shall not be used to reduce the lateral forces and shall not be considered as an effective mechanical connection. The mechanical connections shall be designed to tolerate adjustments to the temporary support frame throughout the use of the temporary supports.

TEMPORARY SUPPORT CONSTRUCTION

Attention is directed to paragraphs 1 through 7 of Section 51-1.06B, "Falsework Construction," of the Standard Specifications. All reference to falsework in these paragraphs shall also apply to temporary supports.

Welding, welder qualification, and inspection of welding for all steel members shall conform to the requirements of ANSI/AASHTO/AWS D1.1.

Prior to proceeding with bridge removal, an engineer for the Contractor who is registered as a Civil Engineer in the State of California shall inspect the temporary supports, including jacking systems, for conformity with the working drawings. The Contractor's registered engineer shall certify in writing that the temporary supports, including jacking systems, conform to the working drawings, and that the material and workmanship are satisfactory for the purpose intended. A copy of this certification shall be available at the site of the work at all times.

Jacking operations shall be carefully controlled and monitored to ensure that the jacking loads are applied simultaneously to prevent distortion and excessive stresses that would damage the structure.

Should unanticipated displacements, cracking or other damage occur, the construction shall be discontinued until corrective measures satisfactory to the Engineer are performed. Damage to the structure as a result of the Contractor's operations shall be repaired by the Contractor in conformance with the provisions in Section 7-1.11, "Preservation of Property," of the Standard Specifications.

REMOVING TEMPORARY SUPPORTS

Attention is directed to Section 51-1.06C, "Removing Falsework," of the Standard Specifications. All references to falsework in this section shall also apply to temporary supports.

Attachments shall be removed from the existing structure and concrete surfaces restored to original conditions, except where permanent alterations are shown on the plans.

Full compensation for temporary supports shall be considered as included in the contract unit price paid per pound for column casing and no separate payment will be allowed therefor.

10-1.32 HAZARDOUS AND NON-HAZARDOUS MATERIAL EXCAVATION

Attention is directed to "Hazardous and Non-Hazardous Material, General" of these special provisions regarding material characterization definitions, applicable rules and regulations, Health and Safety, Training, and Testing for excavation, transport, and disposal of hazardous material and non-hazardous material.

Any solid debris generated during the contract construction operation shall be retained and properly disposed of. Debris shall be disposed of outside the State's right of way in accordance with Section 7-1.13 of the Standard Specifications.

SEISMIC RETROFIT WORK

All hazardous material and non-hazardous material to be excavated as shown on the plans and as described in these special provisions shall be transported to a disposal facility permitted to accept such material.

Attention is directed to the following tables that summarize the material characterization in the areas to be excavated.

Stockpiling of hazardous and non-hazardous material will not be allowed. Hazardous material shall be transferred directly from the excavation to a storage container approved for transport of hazardous waste by the United States Department of Transportation, or a registered transport vehicle. Non-hazardous material shall be transferred directly from the excavation to a storage container or a transport vehicle.

Hazardous material and non-hazardous material on exteriors of transport vehicles shall be removed and placed either into the current transport vehicle or the excavation prior to the vehicle leaving the loading area. Hazardous material or non-hazardous material shall not be deposited on public roads. The Contractor shall indemnify the State from any costs due to spillage during the transport of hazardous material or non-hazardous material to the disposal facility.

ARCHEOLOGICAL WORK

Attention is directed to the section entitled "Areas of Study and Assessment" of these special provisions.

All material to be excavated from the Areas of Study and Assessment is considered hazardous material.

Material excavated from the Areas of Study and Assessment shall be transferred directly from the excavation to a stockpile location approved by the Engineer within the limits of the generating block as shown on the plans. Upon completion of the archeological work, all material shall be placed back and compacted at its original excavation location. To ensure that the excavated material is in its original location, the material shall be segregated per blocks and areas as shown on the plans and each stockpile shall be labeled to indicate the blocks and areas the material was excavated.

Stockpile locations shall be maintained in accordance with the following requirements:

- A. The material shall not contain free liquids that separate readily from the material. The presence or absence of free liquids shall be demonstrated by United States Environmental Protection Agency Method 9095 as modified by Section 66264.314 of Title 22 of the California Code of Regulations (CCR).
- B. The material shall be stored on undamaged 60-mil high density polyethylene or an equivalent impermeable barrier unless the stockpiling location is on a paved surface. If the location is on a paved surface the thickness of the barrier can be reduced to 20-mil high density polyethylene or its equivalent. The dimensions of the barrier shall exceed the dimensions of the stockpile by a minimum of 1 foot at all times. Any seams in the barrier shall be sealed to prevent leakage.
- C. At the end of each day and during storm events the material shall be covered with undamaged 12-mil polyethylene or an equivalent impermeable barrier to prevent windblown dispersion and precipitation run-off and run-on. When more than one sheet is required to cover the material, the sheets shall be overlapped a minimum of 1.5 feet in a manner that prevents water from flowing onto the material. The cover shall be secured in a manner that keeps it in place at all times. Driven anchors shall not be used except at the perimeter of the stockpile. The cover shall be inspected and maintained in accordance with the requirements of "Water Pollution Control" of these special provisions.

These stockpiling requirements apply to all temporary storage of hazardous outside of an excavation. Stockpile material shall be stored no longer than 90 days. After final removal has occurred, the Contractor shall be responsible for any cleanup deemed necessary by the Engineer.

If groundwater is encountered, hazardous material shall be transferred directly from the excavation to a storage container approved for transport of hazardous waste by the United States Department of Transportation.

MEASUREMENT AND PAYMENT

Seismic Retrofit Work

Full compensation for transporting, and disposing of hazardous material and non-hazardous material shall be considered as included in the contract price paid per cubic yard for structure excavation (Type H) and no additional compensation will be allowed therefor.

Archeological Work

Full compensation for excavating, stockpiling, backfilling, and compacting of hazardous material from a depth of 2 feet below to original grade shall be included in the contract price per cubic yard of roadway excavation, as defined and measured in Section 19-2.07 of the Standard Specifications, and no additional compensation will be allowed therefor. Contract price paid per cubic yard shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and doing all work involved, as specified in these special provisions and as directed by the Engineer.

Full compensation for excavating, stockpiling, backfilling, and compacting of hazardous material beyond the depth of 2 feet below the original grade shall be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications.

MATERIAL CHARACTERIZATION SUMMARY

| Transbay Terminal Transit West Loop Seismic Retrofit | | | |
|--|--|------------------|---------------------------|
| Bent | Sample Location | Zone (ft bgs) | Material Characterization |
| N | TTBN-1 | 0-3 | Hazardous Material |
| | | 3-10 | Non-Hazardous Material |
| Q | TTBQ-1 | 0-5 | Non-Hazardous Material |
| R | TTR-1 and TTR-2 | 0-15 | Hazardous Material |
| S | TTBS-1 and TTBS-2 | 0-10 | Non-Hazardous Material |
| U | TTBU-1 and TTBU-3 | 0-3 | Hazardous Material |
| | | 3-10 | Non-Hazardous Material |
| X and W | TTBX-1 and TTBX-2 | 0-15 | Hazardous Material |
| Y | TTBY-1 and TTBY-2 | 0-15 | Hazardous Material |
| Z | TTBZ-1 and TTBZ-2 | 0-10 | Hazardous Material |
| AA | TTBAA-1 and TTBAA-2 | 0-15 | Hazardous Material |
| BB | TTBBB-1 and TTBBB-2 | 0-15 | Hazardous Material |
| CC | TTBCC-1 and TTBBC-2 | 0-15 | Hazardous Material |
| 62 | TTB62-1, TTB62-2, TTB62-3, and TTB62-4 | 0-15 | Hazardous Material |
| 63 | TTB63-1, TTB63-2, TTB63-3, and TTB63-4 | 0-15 | Hazardous Material |
| 64 | TTB64-1, TTB64-2, TTB64-3, and TTB64-4 | 0-20 | Hazardous Material |
| 65 | TTB65-1, TTB65-2, TTB65-3, and TTB65-4 | 0-20 | Hazardous Material |
| 66 | TTB66-1, TTB66-2, TTB66-3, and TTB66-4 | 0-15 | Hazardous Material |
| 67 | TTB67-1, TTB67-2, TTB67-3, and TTB67-4 | 0-15 | Hazardous Material |
| 68 | TTB68-1, TTB68-2, TTB68-3, and TTB68-4 | 0-15 | Hazardous Material |
| 69 | TTB69-1, TTB69-2, TTB69-3, and TTB69-4 | 0-20 | Hazardous Material |

| SFOBB Westbound Mainline Seismic Retrofit Between 4th and 5th Streets | | | |
|--|-----------------|------------------|---------------------------|
| Bent | Sample Location | Zone (ft bgs) | Material Characterization |
| L-98 | L98 | 0-10 | Hazardous Material |
| | | 10-25 | Non-Hazardous Material |
| L-99 | L99 | 0-25 | Non-Hazardous Material |
| L-100 | L100 | 0-25 | Non-Hazardous Material |
| L-101 | L101 | 0-10 | Hazardous Material |
| | | 10-25 | Non-Hazardous Material |
| L-102 | L102 | 0-20 | Hazardous Material |
| L-103 | L103 | 0-10 | Hazardous Material |
| | | 10-25 | Non-Hazardous Material |

| 4th Street On-Ramp Seismic Retrofit | | | |
|-------------------------------------|-----------------|------------------|---------------------------|
| Bent | Sample Location | Zone (ft bgs) | Material Characterization |
| K2-98 | K98 | 0-15 | Hazardous Material |
| | | 15-25 | Non-Hazardous Material |
| K2-99 | K99 | 0-10 | Hazardous Material |
| | | 10-25 | Non-Hazardous Material |
| K2-100 | K100 | 0-10 | Hazardous Material |
| | | 10-25 | Non-Hazardous Material |
| K2-101 | K101 | 0-10 | Hazardous Material |
| | | 10-25 | Non-Hazardous Material |

KEY:

Ft bgs - feet below ground surface

NOTE:

Information presented in the soil analytical results tables is based on the *Site Investigation Report - West Approach Project, Transbay Terminal Loop, San Francisco, California June 1999*, and *Addendum Site Investigation Report - West Approach Project, Bayshore Retrofit Portion, Westbound and 4th Street On-Ramp, San Francisco Oakland Bay Bridge, San Francisco, California, August 1999*, prepared by Professional Service Industries, Inc.

The objective of the site investigation was to determine the contaminant concentration of fill material that would be excavated during this project. The boring operation was terminated upon encountering native material (rock and clay). The native material is assumed to be non-hazardous.

Where a portion of the existing surfacing is to be removed, the outline of the area to be removed shall be cut on a neat line with a power-driven saw to a minimum depth of 0.17-foot before removing the surfacing. Full compensation for cutting the existing surfacing shall be considered as included in the contract price paid per cubic yard for roadway excavation or structure excavation and no additional compensation will be allowed therefor.

STRUCTURE EXCAVATION & BACKFILL

The Contractor shall not have the option to slope back structure excavation. All structure excavation shall be cut vertical.

Hazardous and non-hazardous structure excavation material and water shall conform to the requirements for segregation, storage, handling, loading, transporting and the disposal of hazardous or non-hazardous materials and water as specified in sections "Hazardous and Non-Hazardous Material, General" and "Hazardous and Non-Hazardous Material Excavation" elsewhere in these special provisions.

At the Contractor's option, the Contractor may excavate beyond the limits shown on the plans for the purpose of installing piling under the following conditions:

- A. Limited to areas where the vertical overhead clearance is less than 20 feet measured from the bottom of the steel deck girder to the finished grade.
- B. Limited to every other bent in a construction stage at any given time. Both footings of a double-column bent may be overexcavated simultaneously.
- C. Limited to a depth of 2 feet below the bottom of the existing footing.
- D. Approved working drawings.

The Contractor shall submit to the Engineer working drawings and design calculations for the methods and materials used, and staging of the work to ensure the structural stability of the existing structure during excavation beyond the limits shown on the plans. Such drawings and design calculations shall be signed by an Engineer who is registered as a Civil Engineer in the State of California. Working drawings and design calculations shall conform to the requirements in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications. The number of sets of drawings and design

calculations and times for review shall be the same as specified for falsework working drawings in Section 51-1.06A, "Falsework Design and Drawings," of the Standard Specifications.

At the option of the Contractor, controlled low strength material may be used as structure backfill in areas of excavation below the existing bottom of footing elevation. Controlled low strength material shall consist of a fluid, workable mixture of aggregate, cementitious materials and water.

The Contractor shall determine the mix proportions, submit a copy of the mix design in writing for approval by the Engineer, and pre-qualify material prior to use for all controlled low strength materials to be used as structure backfill.

Controlled low strength materials shall be proportioned such that the backfill will conform to a maximum 28-day compressive strength of 100 psi. Compressive strength shall be determined by ASTM Designation: D 4832, "Preparation and Testing of Soil-Cement Slurry Test Cylinders."

Cement shall be portland cement conforming to the provisions in Section 90-2.01, "Portland Cement," and these special provisions, except no mineral admixture shall be used, or to the physical requirements of ASTM Designation: C 1157M, except that testing will not be required.

Water used for controlled low strength material shall be free from oil, salts and other impurities which would have an adverse effect on the quality of the backfill material.

At the option of the Contractor, aggregate shall be either (1) imported material which is free of organic material and other deleterious substances, or (2) commercial quality concrete sand. Material selected from imported material shall meet the following grading:

| Sieve Sizes | Percentage Passing |
|-------------|--------------------|
| | |
| 1 1/2" | 100 |
| 1" | 80 - 100 |
| 3/4" | 60 - 100 |
| 3/8" | 50 - 100 |
| No. 4 | 40 - 80 |
| No. 100 | 10 - 40 |

Admixtures may be used in conformance with Section 90-4, "Admixtures," of the Standard Specifications. Chemical admixtures containing chlorides as Cl in excess of one percent by weight of admixture, as determined by California Test 415, shall not be used.

Materials for controlled low strength material shall be thoroughly machine-mixed in a pugmill, rotary drum, or other approved mixer. Mixing shall continue until the cementitious material and water are thoroughly dispersed throughout the material. Controlled low strength material shall be placed in the work within 3 hours after introduction of the cement to the aggregates.

Controlled low strength material shall be placed in a uniform manner that will prevent voids in, or segregation of, the backfill. Foreign material which falls into the controlled low strength material prior to or during placement shall be immediately removed.

The quantities of structure excavation, of the types designated in the Engineer's Estimate, will be computed on the basis of the dimensions and details shown on the plans.

Structure excavation (Type H) shall include all structure excavation for seismic retrofit work.

Full compensation for increasing the amount of structure excavation and structure backfill outside the limits shown on the plans for the purpose of installing piling, if used, including any additional shoring costs and costs associated with the additional hazardous or non-hazardous material and water generated, importing and placing additional structure backfill, and meeting the requirements of controlled low strength material shall be considered as included in the contract price paid per cubic yard for structure excavation and structure backfill, of the types shown in the Engineer's Estimate, and no additional compensation will be allowed therefor.

10-1.45 STEEL STRUCTURES

DRAWINGS

The Contractor shall submit to the Engineer a schedule of structural steel working drawing submittals conforming to the following requirements:

The first schedule shall be submitted no more than 60 days after contract approval and at least 30 days prior to submitting any working drawings on the contract, unless otherwise approved in writing by the Engineer.

The schedule shall then be updated and submitted to the Engineer at least every 90 calendar days until all structural steel working drawings have been approved.

Each schedule shall project the submittal of all working drawings for at least one year. All working drawings submittals shall appear on the schedule a minimum of 30 days prior to their submittal for review. The schedule shall include the following information:

1. the dates the working drawing submittals are to be submitted,
2. the approximate number of sheets to be included in each submittal,
3. the location where the work is to be performed,
4. a general description of the work to be performed.

In addition, the Contractor shall submit a written "Notification of Working Drawings" to the Engineer at least 30 calendar days in advance of submitting any working drawing submittal. The advance notification shall include the following information:

1. the date the working drawing submittal or submittals are to be submitted,
2. the number of sheets to be included in each submittal,
3. the location where the work is to be performed,
4. a description of the work to be performed.

In addition to the requirements of Section 55-1.02, "Drawings," of the Standard Specifications and these special provisions, the following requirements shall apply:

The Contractor shall allow the review times specified herein after complete working drawings and all supporting data are submitted to the Engineer. Complete drawings shall be fully detailed to complete the fabrication and erection of the required structural steel work including all field controlled dimensions verified by the Contractor.

The review time for a set of working drawings will be considered as starting when the Engineer has received the complete set of working drawings and all supporting data.

If at any time during the review process the working drawings are determined to be incomplete, then the drawings will be rejected and returned to the Contractor for correction. The review time on a set of returned drawings will be considered stopped on the date the drawings are date stamped by the Engineer for return. The Contractor shall submit a notice of resubmittal to the Engineer within 5 days after receipt of the rejected set. The notice shall contain the submittal number, revisions number, and date the revised set will be returned for review. The revised set shall contain the same work as was originally submitted.

After a revised set of drawings have been received by the Engineer, the new review time for that set of revised drawings will be the original review time, less the time already spent under review before rejection, plus 3 weeks.

Any time during the review process, a request for information, regarding the working drawings, may be submitted to the Contractor by the Engineer. The working drawing review time will continue with no interruptions unless the Contractor does not respond to the Engineer's request for information within 3 working days, at which time the review time will stop.

The review time for a set of working drawings will be considered as completed on the date the working drawings have been reviewed, approved, and mailed to the Contractor with a date stamp by the Engineer.

After review and approval of the working drawings, between 6 and 12 sets, as requested by the Engineer, shall be submitted to the Engineer for final approval. These sets will be the only sets stamped "Approved" and will be distributed for use during construction.

Working drawings shall be submitted in sets not exceeding 20 sheets. Each set of working drawings shall be identified with a unique and sequential number. Multiple sets of working drawings may be submitted simultaneously.

In the event several sets of working drawings are submitted simultaneously, or additional sets of drawings are submitted for review before the review of the previously submitted sets of drawings have been completed, the Contractor shall designate the sequence in which all of the sets of drawings which have been submitted are to be reviewed.

The Contractor may choose to change the priority of the set of working drawings that is designated as top priority. The Contractor shall submit a written notification outlining his proposal for reprioritization of working drawing submittal reviews in conformance with the following requirements:

- 1) All sets of working drawings under review shall be reprioritized by the Contractor.
- 2) The proposed reprioritization, including review time for each submittal, shall be agreed upon by the Engineer and the Contractor before it is approved and implemented.
- 3) The review time for the new top priority set will restart and will not exceed 6 weeks from the time that the Contractor's reprioritization proposal has been approved, unless the set is returned for revisions.
- 4) The review time for each submittal will be adjusted based on the Contractor's reprioritization and the total number of working drawings under review at the time of the written notification.

When the total number of working drawings under review is less than 60 sheets, then the time to be provided for review for each set of drawings in the sequence shall not exceed 6 weeks for the top priority set, and not exceed 8 weeks from the original date received by the Engineer for each set of lower priority drawings which is still under review.

When the total number of working drawings under review exceeds 60 sheets, then the time to be provided for review for each set of drawings in the sequence shall not exceed 6 weeks for the top priority set, and not exceed 12 weeks from the original date received by the Engineer for each set of lower priority which is still under review.

Should the Engineer fail to review the complete working drawing submittal within the time specified and if, in the opinion of the Engineer, the Contractor's controlling operation is delayed or interfered with by reason of the delay in reviewing the working drawing submittal, an extension of time commensurate with the delay in completion of the work thus caused will be granted in accordance with Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

The first paragraph in Section 55-1.02, "Drawings," of the Standard Specifications is amended to read:

55-1.02 Drawings.—The Contractor shall submit working drawings for structural steel to the Engineer for approval in accordance with the provisions in Section 5-1.02, "Plans and Working Drawings." For initial review, 6 sets of the drawings shall be submitted for highway bridges and 10 sets shall be submitted for railroad bridges.

Paragraphs 7 through 8 of Section 55-1.02, "Drawings," of the Standard Specifications are amended to read:

At the completion of each structure on the contract, one set of reduced prints on 20 pound (minimum) bond paper, 11 inches by 17 inches in size, of the corrected original tracings of all working drawings for each structure shall be furnished to the Engineer. Reduced prints that are common to more than one structure shall be submitted for each structure. An index prepared specifically for the drawings for each structure containing sheet numbers and titles shall be included on the first reduced print in the set for each structure. Reduced prints for each structure shall be arranged in the order of drawing numbers shown in the index.

The edge of the corrected original tracing image shall be clearly visible and visually parallel with the edges of the page. A clear, legible symbol shall be provided on the upper left side of each page to show the amount of reduction and a horizontal and vertical scale shall be provided on each reduced print to facilitate enlargement to original scale.

Charpy V-notch (CVN) impact values for steel members shall conform to the requirements for temperature in Zone 2.

The first sentence of the first paragraph in Section 55-1.03, "Inspection," of the Standard Specifications is amended to read:

Structural steel will be inspected at the fabrication site except as provided in "Check Testing" of the special provisions.

Additional certified test reports for fastener assemblies will be required as specified in "Fabrication" of this specification.

ENGINEER'S ESTIMATE
04-0435C4

| Item | Item Code | Item | Unit of Measure | Estimated Quantity | Unit Price | Item Total |
|------|-----------|---|-----------------|--------------------|------------|------------|
| 1 | 020356 | SURVEY OF EXISTING NON-HIGHWAY FACILITIES | LS | LUMP SUM | LUMP SUM | |
| 2 | 020357 | VIBRATION MONITORING | LS | LUMP SUM | LUMP SUM | |
| 3 | 020358 | SEWER VIDEO SURVEY | LS | LUMP SUM | LUMP SUM | |
| 4 | 020359 | TEMPORARY CONCRETE WASHOUT FACILITY | LS | LUMP SUM | LUMP SUM | |
| 5 | 020360 | ELECTRONIC MOBILE DAILY DIARY COMPUTER SYSTEM DATA DELIVERY | LS | LUMP SUM | LUMP SUM | |
| 6 | 070010 | PROGRESS SCHEDULE (CRITICAL PATH) | LS | LUMP SUM | LUMP SUM | |
| 7 | 071321 | TEMPORARY FENCE (TYPE CL-6) | LF | 2,170 | | |
| 8 | 074019 | PREPARE STORM WATER POLLUTION PREVENTION PLAN | LS | LUMP SUM | LUMP SUM | |
| 9 | 074020 | WATER POLLUTION CONTROL | LS | LUMP SUM | LUMP SUM | |
| 10 | 020361 | TEMPORARY COVER | LS | LUMP SUM | LUMP SUM | |
| 11 | 020362 | TEMPORARY SILT FENCE AT CHAIN LINK FENCE | LF | 4,780 | | |
| 12 | 020363 | TEMPORARY ENTRANCE/EXIT | LS | LUMP SUM | LUMP SUM | |
| 13 | 074029 | TEMPORARY SILT FENCE | LF | 1,000 | | |
| 14 | 020364 | TEMPORARY SAND BAG BARRIER | LF | 4,630 | | |
| 15 | 070018 | TIME RELATED OVERHEAD | WDAY | 450 | | |
| 16 | 120090 | CONSTRUCTION AREA SIGNS | LS | LUMP SUM | LUMP SUM | |
| 17 | 120100 | TRAFFIC CONTROL SYSTEM | LS | LUMP SUM | LUMP SUM | |
| 18 | 120165 | CHANNELIZER (SURFACE MOUNTED) | EA | 33 | | |
| 19 | 129000 | TEMPORARY RAILING (TYPE K) | LF | 3,140 | | |
| 20 | 129100 | TEMPORARY CRASH CUSHION MODULE | EA | 40 | | |